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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,885	01/30/2004	Goo-Soo Ghang	1349.1342	4172

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EXAMINER	
PHAM, HAI CHI	

ART UNIT	PAPER NUMBER
2861	

DATE MAILED: 06/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/766,885	GHANG ET AL.	
	Examiner	Art Unit	
	Hai C. Pham	2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) *4,5,10 and 11* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,7,13 and 14* is/are rejected.

7)☒ Claim(s) *2,3,6,8,9,12 and 15-18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Species I including claims 1-3, 6-9 and 12-18 in the reply filed on 04/18/06 is acknowledged.

2. Claims 4-5 and 10-11 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 04/18/06.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 7, 13-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Sawada (U.S. 6,198,495).

Sawada discloses an image forming apparatus having means for correcting deviations between scanning light beams, the apparatus comprising a laser scanning unit (LSU) having a first laser diode (semiconductor laser 130A emitting first laser beam L1) and a second laser diode (semiconductor laser 130B emitting second laser beam L2) and at least one sync signal detection sensor (index sensor 140 having four light beam detecting means A-D) (Fig. 4) that generates a sync signal based on at least one of the first laser diode and the second laser diode based on selectively driving either of the first laser diode and the second laser diode (only the laser beam L1 is activated and results in the outputs of sensors A and D as shown in Figs. 11B-C and both laser beams L1 and L2 are respectively and selectively detected by the respective sensors A and D to output sync signals as shown in Figs. 11E-F), and generates at least one offset sync signal having first and second sensor detection periods based on the sync signal generated based on the at least one of the first laser diode and the second laser diode (outputs of sensors A and D based on the detection of laser beams L1 and L2 and represented by the deviation time T2 as shown in Figs. 11E-G), a compensation unit (synchronization circuit 60 along with the modulation circuits 50a and 50b) compensating for first and second video data (Image DATA for driving each of the lasers 130A and 130B) input in synchronization with a video clock (DCK1 and DCK2) based on the first and second sensor detection periods (index signals S1 and S2 are generated to control the recording start positions of the laser beams L1 and L2) (Fig. 10), and a laser diode control unit (timing circuit 33, Fig. 5) outputting control signals to control the first laser diode and the second laser diode based on the compensated first

and second video data (the laser driving circuits 32a and 32b are controlled by the control signals from the timing circuit 33 so that the recording start positions of laser beams L1 and L2 are vertically aligned) (col. 7, lines 44-60) (see also col. 11, line 17 through col. 13, line 4).

The method claim 7 is deemed to be clearly anticipated by functions of the above structures.

With regard to claim 13, Sawada teaches the laser scanning unit having a first laser diode (semiconductor laser 130A emitting first laser beam L1) and a second laser diode (semiconductor laser 130B emitting second laser beam L2), and generating a first sync signal (output of sensor A – Fig. 11E) and a second sync signal (output of sensor B – Fig. 11F) based respectively on light emitted by the first laser diode and the second laser diode, the first sync signal and the second sync signal respectively having a first sensor detection period and a second sensor detection period (e.g., output pulses of the respective sensors A and D having respective periods), a compensation unit (synchronization circuit 60 along with the modulation circuits 50a and 50b) receiving video data and using the first sensor detection period and the second sensor detection period to compensate for the video data (image DATA), and a laser diode control unit (timing circuit 33) controlling the first laser diode and the second laser diode based on the compensated for video data (Fig. 5).

With regard to claim 14, Sawada further teaches the laser scanning unit further comprising a first sync signal detection sensor (sensor A for detecting specifically the first laser beam L1) and a second sync signal detection sensor (sensor D for detecting

specifically the second laser beam L2) (Fig. 11D) corresponding respectively to the first laser diode and the second laser diode, the first sync signal detection sensor and the second sync signal detection sensor respectively generating a sync signal based on the first laser diode (Fig. 11E) and a sync signal based on the second laser diode (Fig. 11F).

Allowable Subject Matter

6. Claims 2-3, 6, 8-9, 12 and 15-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: The primary reason for the indication of the allowability of claims 2, 8 and 15 is the inclusion therein, in combination as currently claimed, of the limitations "a second offset value calculation unit using the counting clock to calculate a second offset value, which is a difference between the sync signal generated based on the at least one of the first laser diode and the second laser diode and the video clock" in combination with "the video data compensation unit compensating for a delay of the first and second video data based on the first offset value and the second offset value" as currently claimed, and with claims 2 and 8 further including "the counting clock generation unit using an inverter". The combined limitations are not found taught by the prior art of record considered alone or in combination.

The primary reason for the indication of the allowability of claim 18 is the inclusion therein, in combination as currently claimed, of the limitations "the first sensor detection period of the first sync signal is generated by driving both the first laser diode and the second laser diode, and the second sensor detection period of the first sync signal is generated by driving only the first laser diode" and "the first sensor detection period of the second sync signal is generated by driving both the first laser diode and the second laser diode, and the second sensor detection period of the second sync signal is generated by driving only the second laser diode", which are not found taught by the prior art of record considered alone or in combination.

Claims 3, 6, 9, 12 and 16-17 are allowable because they are directly or indirectly dependent from claims 2, 8 and 15 above.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai C. Pham whose telephone number is (571) 272-2260. The examiner can normally be reached on M-F 8:30AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vip Patel can be reached on (571) 272-2458. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hai Phan

HAI PHAM
PRIMARY EXAMINER
June 20, 2006